What is claimed is:

1. An aptamer comprising a first binding domain which recognizes a first ligand coupled to a second binding domain which recognizes a second ligand wherein binding of the second ligand by the second binding domain is regulated by binding of the first ligand by the first binding domain .

2. The aptamer of Claim 1, wherein the first ligand binding domain specifically interacts with an allosteric effector molecule and the second ligand binding domain specifically interacts with a drug target of the allosteric effector molecule.

3. The aptamer of Claim 2, wherein the allosteric effector molecule is glucose and the drug target is the insulin receptor.

4. The aptamer of Claim 1, wherein binding of the second ligand by the second binding domain is activated by binding of the first ligand by the first binding domain.

5. The aptamer of Claim 2, wherein binding of the second ligand by the second binding domain is activated by binding of the first ligand by the first binding domain.

6. The aptamer of Claim 1, wherein binding of the second ligand by the second binding domain is suppressed by binding of the first ligand by the first binding domain.

7. The aptamer of Claim 2, wherein binding of the second ligand by the second binding domain is suppressed by binding of the first ligand by the first binding domain.

8. A method of selecting regulated aptamers comprising the steps of isolating first and second aptamers which bind first and second ligands, respectively, using SELEX, engineering a diverse sequence pool of molecules that contain the binding domains of the first and second aptamers, and selecting for regulated aptamers from that pool wherein binding of the second ligand by the second binding domain is regulated by binding of the first ligand by the first binding domain.

9. A method of treating diabetes in a subject comprising the steps of administering a therapeutically effective amount of an insulin receptor aptamer, wherein said insulin receptor aptamer binds to a glucose effector and is activated by the glucose effector to bind to said insulin receptor, and triggering glucose uptake by cells.